CLAIM AMENDMENTS

IN THE CLAIMS:

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. (Original) A method for quantifying a communication channel inter-symbol interference (ISI) jitter effect contribution to timing skew, comprising:

deriving an input signal to the communication channel using a communication channel impulse response function and a sampled output signal; and

calculating a difference between the derived input signal based on a substantially lossless communication channel propagation delay and the sampled output signal to identify the ISI jitter effect contribution to timing skew.

2. **(Currently Amended)** The method of Claim 1, **further comprising** sending a low frequency training pattern along the communication channel via idle insertion/deletion to calculate the substantially lossless communication channel propagation delay.

3. (Original) The method of Claim 1, further comprising calculating the substantially lossless communication channel propagation delay from measured physical and electrical characteristics of the communication channel.

4. (Original) The method of Claim 1, further comprising applying a DIRAC impulse input function to the communication channel to calculate the impulse response function.

5. (Original) he method of Claim 1, further comprising deriving the input signal to the communication channel by solving a convolution integral

$$y(t) = x(t) * h(t) = \int_{-\infty}^{\infty} x(\tau) \cdot h(t-\tau) d\tau$$

for x(t), where y(t) equals the sampled output and h(t) equals the communication channel impulse response function.

6. (Original) The method of Claim 1, further comprising calculating the difference between the derived input signal based on the substantially lossless communication channel propagation delay and the sampled output signal as measured at a midpoint voltage for each signal to identify the ISI jitter effect contribution to timing skew.

7. **(Currently Amended)** An apparatus for quantifying inter-symbol interference (ISI) jitter contribution to communication link timing skew, comprising:

a transmitter operable to communicate at least one signal on the communication link;

a receiver operably coupled to the transmitter, the receiver operable to receive a signal from the communication link; and

a plurality of gates operably coupled to the receiver and the transmitter, the plurality of gates operable to identify characteristics of the communication link under substantially lossless conditions, identify characteristics of the communication link under lossy conditions, identify an input signal from the lossy characteristics of the communication link and a sampled output signal, and compare the input signal based on the characteristics of the communication link under substantially lossless conditions and the sampled output signal to quantify the ISI jitter contribution to communication link timing skew.

8. (Original) The apparatus of Claim 7, further comprising the plurality of gates operable to serialize a multi-bit signal.

9. (Original) The apparatus of Claim 7, further comprising the plurality of gates operable to convert a serialized multi-bit signal into a multi-bit signal.

10. (Original) The apparatus of Claim 7, further comprising the plurality of gates operable to identify the lossy characteristics of the communications link by calculating an impulse response function for the communication link using a DIRAC impulse input signal.

11. (Original) The apparatus of Claim 7, further comprising the plurality of gates operable to derive the input signal to the communication link from a convolution integral

$$y(t) = x(t) * h(t) = \int_{-\infty}^{\infty} x(\tau) \cdot h(t-\tau) d\tau$$

where h(t) equals the lossy characteristics of the communication link and y(t) equals the sampled output signal.

12. (Original) The apparatus of Claim 7, further comprising the plurality of gates operable to determine characteristics of the communication link under substantially lossless conditions by calculating a propagation delay for a low frequency training pattern introduced via idle insertion/deletion to the communications link.

13. (Original) The apparatus of Claim 7, further comprising the plurality of gates operable to calculate a time of flight for the communication link using measures representative of communication link length, capacitance and inductance.

14. (Original) The apparatus of Claim 13, further comprising the plurality of gates operable to obtain the measures for communication link length, capacitance and inductance from a registry associated with the communication link.

15. **(Currently Amended)** An information handling system, comprising:

at least one processor;

memory operably coupled to the processor; and

a module operably associated with the memory and the **at least one** processor, the module operable to derive an input signal from a sampled output signal and lossyness characteristics of a communication channel and determine a timing offset between the derived input and the sampled output signal, the timing offset representing an intersymbol interference jitter effect contribution to a communication channel timing skew budget.

16. (Original) The information handling system of Claim 15, further comprising the module operable to:

calculate a communication channel propagation delay under substantially lossless conditions; and

determine the timing offset by subtracting from the sampled output signal the derived input signal calculated in accordance with the substantially lossless communication channel propagation delay.

17. (Original) The information handling system of Claim 16, further comprising the module operable to calculate the substantially lossless communication channel propagation delay using electrical characteristics of the communication channel obtained from a registry.

18. (Original) The information handling system of Claim 15, further comprising the module implemented as a serializer/deserializer.

19. (Original) The information handling system of Claim 15, further comprising the module operable to characterize communication channel lossyness by applying a DIRAC impulse input function to the communication channel and measuring communication channel response.

20. (Original) The information handling system of Claim 15, further comprising the module implemented in a program of instructions operable to simulate at least one aspect of information handling system design.

21. (Original) The information handling system of Claim 15, further comprising the module operable to characterize the lossyness characteristics and a substantially lossless propagation delay of a communication channel at power-up of the module.